

additional items into the self-service checkout terminal 10. The routine 58 then ends thereby causing the routine 50 (see FIG. 4) to return to the itemization step 56 in order to monitor the user's entry of the additional items.

While the invention has been illustrated and described in detail in the drawings and foregoing description, such an illustration and description is to be considered as exemplary and not restrictive in character, it being understood that only the preferred embodiment has been shown and described and that all changes and modifications that come within the spirit of the invention are desired to be protected.

For example, while the transaction level weight database is herein described as being cleared prior to the end of the finalization step 58 (i.e. in steps 220, 222, and 226) and has numerous advantages associated therewith, certain of these advantages may be achieved with other configurations. For example, the processing unit 26 may be configured so as to maintain the records within the transaction level weight database between subsequent users. Hence, the weight values associated with a first user's items may be used to verify the weights associated with a second user's items. It should be appreciated that if configured in such a manner, the transaction level weight database may be cleared periodically so as to reduce the amount of memory needed in the memory device 27 to maintain the transaction level weight database. Moreover, it should be further appreciated that that if configured in such a manner, the transaction level weight database may be cleared in a progressive manner in which the oldest records are displaced by newer records in the transaction level weight database after a predetermined period of time.

In addition, it should be appreciated that the transaction level weight database may also be configured to include records of other measurable characteristics associated with items entered into the self-service checkout terminal 10. For example, the transaction level weight database may be configured to include a record corresponding to the color, size, shape, smell, or texture of an item if the self-service checkout terminal 10 is configured to include a mechanism to measure such characteristics of the item.

What is claimed is:

1. A method of providing security during operation of a checkout terminal, comprising the steps of:

creating a database during a checkout procedure which includes a first record corresponding to an input item entered into the terminal during the checkout procedure, the first record including (1) a first identification code associated with the input item, and (2) an input weight value corresponding to the weight of the input item;

determining a second identification code associated with a removal item in response to a user voiding entry of the removal item;

detecting the weight of the removal item and generating a removal weight value in response thereto; and  
generating a wrong-item-removed control signal if (1) the first identification code is the same as the second identification code, and (2) the input weight value does not match the removal weight value.

2. The method of claim 1, further comprising the steps of:  
updating an electronic log value in response to generation of the wrong-item-removed control signal; and  
comparing the electronic log value to a log threshold and generating a personnel signal in response thereto.

3. The method of claim 1, wherein:  
the terminal includes a first scale, and

the detection step includes the step of detecting the weight of the removal item with the first scale and generating the removal weight value in response thereto.

4. The method of claim 1, further comprising the step of:  
generating a correct-item-removed control signal if (1) the first identification code is the same as the second identification code, and (2) the input weight value matches the removal weight value.

5. The method of claim 1, further comprising the step of:  
generating a personnel control signal in response to generation of the wrong-item-removed control signal.

6. The method of claim 5, further comprising the step of:  
suspending operation of the terminal in response to generation of the personnel control signal.

7. The method of claim 3, wherein (1) the first scale is positioned in a first area associated with the terminal, (2) the terminal further has a second scale positioned in a second area associated with the terminal, and (3) the first area is located at a position downstream from the second area, further comprising the steps of:

detecting the weight of the removal item with the second scale and generating a return weight value associated with the weight of the removal item in response thereto; and

generating a wrong-item-returned control signal if the return weight value does not match the removal weight value.

8. A method of providing security during operation of a checkout terminal, with the terminal having a first scale, comprising the steps of:

storing a first identification code associated with an input item in a memory in response to entry of the input item into the terminal;

detecting the weight of the input item with the first scale and storing an input weight value associated with the weight of the input item in the memory in response thereto;

retrieving a second identification code associated with a removal item from the memory in response to a user voiding entry of the removal item;

detecting the weight of the removal item with the first scale and generating a removal weight value associated with the weight of the removal item in response thereto; and

generating a wrong-item-removed control signal if (1) the first identification code is the same as the second identification code, and (2) the input weight value does not match the removal weight value.

9. The method of claim 8, further comprising the step of:  
updating an electronic log value in response to generation of the wrong-item-removed control signal.

10. The method of claim 9, further comprising the step of:  
comparing the electronic log value to a log threshold and generating a personnel signal in response thereto.

11. The method of claim 8, further comprising the step of:  
generating a correct-item-removed control signal if (1) the first identification code is the same as the second identification code, and (2) the input weight value matches the removal weight value.

12. The method of claim 8, further comprising the step of:  
generating a personnel control signal in response to generation of the wrong-item-removed control signal.

13. The method of claim 12, further comprising the step of:  
suspending operation of the terminal in response to generation of the personnel control signal.

14. The method of claim 8, wherein (1) the first scale is positioned in a first area associated with the terminal, (2) the terminal further has a second scale positioned in a second area associated with the terminal, and (3) the first area is located at a position downstream from the second area, further comprising the steps of:

detecting the weight of the removal item with the second scale and generating a return weight value associated with the weight of the removal item in response thereto; and

generating a wrong-item-returned control signal if the return weight value does not match the removal weight value.

15. The method of claim 8, wherein:

the terminal includes a bagwell having a grocery container therein,

the first scale is configured to detect the weight of the grocery container and any items located therein,

the step of detecting the weight of the input item includes the step of detecting the weight of the input item when the input item is located within the grocery container, and

the step of detecting the weight of the removal item includes the step of detecting the weight of the removal item when the removal item is located outside of the grocery container.

16. A checkout terminal, comprising:

a first weight scale;

a memory;

means for storing a first identification code associated with an input item in said memory in response to entry of said input item into said terminal;

means for detecting the weight of said input item with said first weight scale and storing an input weight value associated with the weight of said input item in said memory in response thereto;

means for retrieving a second identification code associated with a removal item from said memory in response to a user voiding entry of said removal item;

means for detecting the weight of said removal item with said first weight scale and generating a removal weight value associated with the weight of said removal item in response thereto; and

means for generating a wrong-item-removed control signal if (1) said first identification code is the same as said second identification code, and (2) said input weight value does not match said removal weight value.

17. The checkout terminal of claim 16, further comprising:

means for updating an electronic log value in response to generation of said wrong-item-removed control signal; and means for comparing said electronic log value to a log threshold and generating a personnel signal in response thereto.

18. The checkout terminal of claim 16, further comprising:

means for generating a correct-item-removed control signal if (1) said first identification code is the same as said second identification code, and (2) said input weight value matches said removal weight value.

19. The checkout terminal of claim 16, further comprising:

means for generating a personnel control signal in response to generation of said wrong-item-removed control signal; and

means for suspending operation of said terminal in response to generation of said personnel control signal.

20. The checkout terminal of claim 16, further comprising:

a second weight scale;

means for detecting the weight of said removal item with said second scale and generating a return weight value associated with the weight of said removal item in response thereto; and

means for generating a wrong-item-returned control signal if said return weight value does not match said removal weight value,

wherein (1) said first weight scale is positioned in a first area associated with said terminal, (2) said second weight scale is positioned in a second area associated with said terminal, and (3) said first area is located at a position downstream from said second area.

21. The checkout terminal of claim 16, further comprising:

a bagwell having a grocery container therein, wherein said first weight scale is configured to detect the weight of said grocery container and any items located therein;

means for detecting the weight of said input item when said input item is located within said grocery container; and

means for detecting the weight of said removal item when said removal item is located outside of said grocery container.

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